NATIONAL GUIDELINE CLEARINGHOUSE™ (NGC) GUIDELINE SYNTHESIS

SCREENING FOR COLORECTAL CANCER

Guidelines

1. American Gastroenterological Association, American Society for Gastrointestinal Endoscopy, American College of Physicians, American College of Gastroenterology (AGA/ASGE/ACP/ACG). Colorectal cancer screening and surveillance: clinical guidelines and rationale-update based on new evidence. Gastroenterology 2003 Feb;124(2):544-60. [102 references]
2. Finnish Medical Society Duodecim (FMS). Prevention and screening of colorectal cancer. Helsinki, Finland: Duodecim Medical Publications Ltd.; 2005 Feb 23. Various p.
3. University of Michigan Health System (UMHS). Adult preventive health care: cancer screening. Ann Arbor (MI): University of Michigan Health System; 2004 May. 12 p. [4 references]

TABLE OF CONTENTS:

INTRODUCTION:

A direct comparison of American Gastroenterological Association/American Society for Gastrointestinal Endoscopy/American College of Physicians/American College of Gastroenterology (AGA/ASGE/ACP/ACG), Finnish Medical Society Duodecim (FMS), and University of Michigan Health System (UMHS) recommendations for colorectal cancer screening, among individuals of varying risk for developing colorectal cancer, is provided in the five tables below. This synthesis purposefully excludes recommendations for symptomatic individuals and the management of positive screening results.

Table 1 presents the guidelines' scope, comparing the objectives, target population, intended users, and screening interventions discussed in each guideline. Table 2 focuses on screening recommendations for asymptomatic individuals who are at average risk for colorectal cancer. Various screening interventions are presented along with recommendations regarding frequency and administration of screening tests where applicable. Table 3 considers screening and surveillance recommendations for individuals at increased risk for colorectal cancer. Table 4 compares the potential benefits and possible harms associated with screening. Table 5 provides a comparison of the various evidence and recommendation rating schemes used by FMS and UMHS. It also includes citations for the references supporting recommendations, where applicable.

Following the content comparison, areas of agreement and differences among the guidelines are discussed. In general, the timing of the guideline with respect to available data is an important factor to consider when evaluating areas of differences among guidelines.

Abbreviations used in the text and table:

- ACG, American College of Gastroenterology
- ACP, American College of Physicians
- AGA, American Gastroenterological Association
- ASGE, American Society for Gastrointestinal Endoscopy
- CRC, colorectal cancer
- DCBE, double contrast barium enema
- DRE, digital rectal examination
- FAP, familial adenomatous polyposis
- FMS, Finnish Medical Society Duodecim
- FOBT, fecal occult blood testing
- HNPCC, hereditary nonpolyposis colorectal cancer
- TCE, total colon examination
- UMHS, University of Michigan Health System

TABLE 1: SCOPE	
Objective	
AGA/ASGE/ACP/ACG (2003)	• To incorporate updated evidence into clinical practice recommendations

	• To summarize new developments in the field and suggest how they should change practice
FMS (2005)	Evidence-Based Medicine Guidelines collect, summarize, and update the core clinical knowledge essential in general practice. The guidelines also describe the scientific evidence underlying the given recommendations.
UMHS (2004)	To implement an evidenced-based strategy for cancer screening in adults
Target Population	
AGA/ASGE/ACP/ACG (2003)	• People in the United States (U.S.) at average risk for CRC (asymptomatic, age ≥50 years, no other risk factors) • People in the U.S. at increased risk for CRC (history of adenomatous polyps or CRC; family history of colon cancer, an adenomatous polyp, familial adenomatous polyposis, or hereditary nonpolyposis CRC) **Note**: People with symptoms or signs that suggest the presence of CRC or polyps fall outside the domain of screening and should be offered an appropriate diagnostic evaluation (see Table 2 in the original guideline document).
FMS (2005)	• Finland • Asymptomatic persons with increased risk for colorectal cancer • General population
UMHS (2004)	• United States • Adults, 18 years and older
Intended Users	
AGA/ASGE/ACP/ACG (2003)	Physicians
FMS (2005)	Health Care Providers Physicians
UMHS (2004)	Physicians

Screening Interventions Considered	
AGA/ASGE/ACP/ACG (2003)	1. FOBT, guaiac-based and immunochemical technologies 2. Sigmoidoscopy 3. Combined FOBT and sigmoidoscopy 4. Colonoscopy 5. DCBE
FMS (2005)	1. FOBT, guaiac-based 2. Colonoscopy
UMHS (2004)	1. FOBT 2. Flexible sigmoidoscopy 3. Colonoscopy Screening options considered but not recommended: 1. Air or double-contrast barium enema 2. DRE 3. Stool deoxyribonucleic acid (DNA) test 4. Virtual colonoscopy **Note**: This guideline also addresses interventions regarding breast cancer screening, prostate cancer screening and cervical cancer screening.

TABLE 2: COMPARISON OF RECOMMENDATIONS FOR SCREENING FOR COLORECTAL CANCER: ADULTS, ≥50 YEARS, NO OTHER RISK FACTORS	
Choosing a Screening Test	
AGA/ASGE/ACP/ACG (2003)	Men and women at average risk should be offered screening for colorectal cancer and adenomatous polyps beginning at age 50 years. They should be offered options for screening, with information about the advantages and disadvantages associated with each approach, and should be given an opportunity to apply their own preferences in selecting how they should be screened.
FMS (2005)	No recommendations offered.

UMHS (2004)	Recommended methods include: FOBT, flexible sigmoidoscopy, or colonoscopy. (DRE is not effective in screening for colorectal cancer.) Individualizing screening to offer the highest likelihood of compliance and the least intrusive option to the patient may be warranted. In addition to patient preference, other factors, such as age, comorbidities, and test availability may influence the choice of screening modality.
Fecal Occult Blood Testing (FOBT)	
AGA/ASGE/ACP/ACG (2003)	• Offer yearly screening with FOBT using a guaiac-based test with dietary restriction or an immunochemical test without dietary restriction. • Two samples from each of 3 consecutive stools should be examined without rehydration.
FMS (2005)	The results of large trials involving screening for faecal occult blood indicate a reduction in mortality from colorectal cancer (Towler et al., 2002) **[A]**, but such screening results in colonoscopy being performed on a large proportion of the screened population. The cost-effectiveness of screening is controversial. Only about 50% of those invited can be expected to attend screening (Vernon, 1997; DARE, 1999) **[B]**.
UMHS (2004)	Initiate: For average risk, asymptomatic patients, screening should begin at age 50. Average risk. FOBT: annually **[A]**
Flexible Sigmoidoscopy	
AGA/ASGE/ACP/ACG (2003)	Offer flexible sigmoidoscopy every 5 years.
FMS (2005)	No recommendations offered.
UMHS (2004)	Initiate: For average risk, asymptomatic patients, screening should begin at age 50. Average risk. Flexible sigmoidoscopy: every 5 years **[A]**
Combined Fecal Occult Blood Testing and Flexible Sigmoidoscopy	

AGA/ASGE/ACP/ACG (2003)	Offer screening with FOBT every year combined with flexible sigmoidoscopy every 5 years. When both tests are performed, the FOBT should be done first.
FMS (2005)	No recommendations offered.
UMHS (2004)	Initiate: For average risk, asymptomatic patients, screening should begin at age 50. Average risk: FOBT/flexible sigmoidoscopy: annually/every 5 years **[B]**
Digital Rectal Examination (DRE)	
AGA/ASGE/ACP/ACG (2003)	Screening with DRE was not considered.
FMS (2005)	Screening with DRE was not considered.
UMHS (2004)	DRE is not effective in screening for colorectal cancer.
Barium Enema	
AGA/ASGE/ACP/ACG (2003)	Offer DCBE every 5 years.
FMS (2005)	No recommendations offered.
UMHS (2004)	Initiate: For average risk, asymptomatic patients, screening should begin at age 50. Average risk: Air or double-contrast barium enema (acceptable modality but not recommended): every 5 years **[B]**.
Colonoscopy	
AGA/ASGE/ACP/ACG (2003)	Offer colonoscopy every 10 years.
FMS (2005)	The use of colonoscopy for screening of asymptomatic individuals is indicated only in cases with marked familial susceptibility to cancer, or if an adenoma has earlier been removed endoscopically.

UMHS (2004)	Initiate: For average risk, asymptomatic patients, screening should begin at age 50. Average risk: Colonoscopy: every 10 years **[B]**.

TABLE 3: COMPARISON OF RECOMMENDATIONS FOR SCREENING FOR COLORECTAL CANCER: PEOPLE AT INCREASED RISK FOR COLORECTAL CANCER	
People with Family History of Colorectal Cancer	
AGA/ASGE/ACP/ACG (2003)	People with a first-degree relative (parent, sibling, or child) with colon cancer or adenomatous polyps diagnosed at age <60 years or 2 first-degree relatives diagnosed with colorectal cancer at any age should be advised to have screening colonoscopy starting at age 40 years or 10 years younger than the earliest diagnosis in their family, whichever comes first, and repeated every 5 years (see Table 3 in the original guideline document). People with a first-degree relative with colon cancer or adenomatous polyp diagnosed at age $\geq$60 years or 2 second-degree relatives with colorectal cancer should be advised to be screened as average risk persons, but beginning at age 40 years. People with 1 second-degree relative (grandparent, aunt, or uncle) or third-degree relative (great-grandparent or cousin) with colorectal cancer should be advised to be screened as average risk persons.
FMS (2005)	The use of colonoscopy for screening of asymptomatic individuals is indicated only in cases with marked familial susceptibility to cancer, or if an adenoma has earlier been removed endoscopically.
UMHS (2004)	• Persons who have one second-degree (includes grandparents, aunts, and uncles) or any third-degree relative (includes great-grandparents and cousins) with colorectal cancer should be screened in the same way as average risk individuals.* • Persons who have a first degree relative (includes parents, siblings, and children) affected with colorectal cancer or adenomatous polyp at age $\geq$60 years, or 2 second-degree relatives affected with colorectal cancer should be screened in the same

	way as average risk individuals, but starting at age 40 years.* • Persons who have two or more first-degree relatives with colon cancer, or a single first-degree relative with colon cancer or adenomatous polyps diagnosed at an age <60 years should be screened with a colonoscopy every 5 years, beginning at age 40 years or 10 years younger than the earliest diagnosis in the family, whichever comes first.* *From the American Gastroenterological Association, American Society for Gastrointestinal Endoscopy, American College of Physicians, American College of Gastroenterology (AGA/ASGE/ACP/ACG). Colorectal cancer screening and surveillance: clinical guidelines and rationale-update based on new evidence. Gastroenterology 2003 Feb;124(2):544-60.
People with a Family History of Familial Adenomatous Polyposis	
AGA/ASGE/ACP/ACG (2003)	People who have a genetic diagnosis of familial adenomatous polyposis (FAP), or are at risk of having FAP but genetic testing has not been performed or is not feasible, should have annual sigmoidoscopy, beginning at age 10 to 12 years, to determine if they are expressing the genetic abnormality. Genetic testing should be considered in patients with FAP who have relatives at risk. Genetic counseling should guide genetic testing and considerations of colectomy.
FMS (2005)	The use of colonoscopy for screening of asymptomatic individuals is indicated only in cases with marked familial susceptibility to cancer or if an adenoma has earlier been removed endoscopically.
UMHS (2004)	• Persons who have a first degree relative (includes parents, siblings, and children) affected with colon cancer or adenomatous polyps at age ≥60 years should be screened in the same way as average risk individuals, but starting at age 40 years.* • Persons who have two or more first-degree relatives with colon cancer, or a single first-degree relative with colon cancer or adenomatous polyps diagnosed at an age <60 years should be screened with a colonoscopy every 5 years, beginning at age 40 years or 10 years younger than the earliest diagnosis in the family, whichever comes first* • Persons who are gene carriers or at risk for familial adenomatous polyposis (includes the subcategories of familial adenomatous polyposis, Gardner syndrome, some Turcot syndrome families, and attenuated adenomatous polyposis coli [AAPC]) should be screened with a sigmoidoscopy annually,

	beginning at age 10 to 12 years. (For patients with APPC, colonoscopy should be used instead of sigmoidoscopy because of the preponderance of proximal colonic adenomas. Colonoscopy screening in AAPC should probably begin in the late teens or early 20s.)* *From the American Gastroenterological Association, American Society for Gastrointestinal Endoscopy, American College of Physicians, American College of Gastroenterology (AGA/ASGE/ACP/ACG). Colorectal cancer screening and surveillance: clinical guidelines and rationale-update based on new evidence. Gastroenterology 2003 Feb;124(2):544-60.
People with a Family History of Hereditary Nonpolyposis Colorectal Cancer (HNPCC)	
AGA/ASGE/ACP/ACG (2003)	People with a genetic or clinical diagnosis of HNPCC or who are at increased risk for HNPCC should have colonoscopy every 1 to 2 years beginning at age 20 to 25 years, or 10 years earlier than the youngest age of colon cancer diagnosis in the family--whichever comes first. Genetic testing for HNPCC should be offered to first-degree relatives of persons with a known inherited mismatch repair (MMR) gene mutation. It should also be offered when the family mutation is not already known, but 1 of the first 3 of the modified Bethesda Criteria is met (see Table 5 in the original guideline document).
FMS (2005)	The use of colonoscopy for screening of asymptomatic individuals is indicated only in cases with marked familial susceptibility to cancer or if an adenoma has earlier been removed endoscopically.
UMHS (2004)	Persons who are gene carriers or pancolitis at risk for HNPCC should be screened with a colonoscopy every 1 to 2 years, beginning at age 20 to 25 years or 10 years younger than the earliest case in the family, whichever comes first.* *From the American Gastroenterological Association, American Society for Gastrointestinal Endoscopy, American College of Physicians, American College of Gastroenterology (AGA/ASGE/ACP/ACG). Colorectal cancer screening and surveillance: clinical guidelines and rationale-update based on new evidence. Gastroenterology 2003 Feb;124(2):544-60.
People with a History of Adenomatous Polyps	
AGA/ASGE/ACP/ACG (2003)	Patients who have had 1 or more adenomatous polyps removed at colonoscopy should be managed according to the findings on that colonoscopy. Patients who have

	had numerous adenomas, a malignant adenoma (with invasive cancer), a large sessile adenoma, or an incomplete colonoscopy should have a short interval follow-up colonoscopy based on clinical judgment. Patients who have advanced or multiple adenomas (≥3) should have their first follow-up colonoscopy in 3 years. Patients who have 1 or 2 small (<1 cm) tubular adenomas should have their first follow-up colonoscopy at 5 years. It is not unreasonable, given available evidence, to choose even longer intervals. However, the evidence is still evolving. Future evidence may clarify the intervals more precisely. The timing of the subsequent colonoscopy should depend on the pathology and number of adenomas detected at follow-up colonoscopy. For example, if the first follow-up colonoscopy is normal or only 1 or 2 small (<1 cm) tubular adenomas are found, the next colonoscopy can be in 5 years.
FMS (2005)	• The use of colonoscopy for screening of asymptomatic individuals is indicated if an adenoma has earlier been removed endoscopically. • Follow-up after the initial investigations is not indicated in persons with a single small tubular adenoma in the rectum, or in patients above 75 years of age. • Individuals with a history of one large adenoma or several adenomas of any type should undergo screening colonoscopy at 3- to 5-year intervals.
UMHS (2004)	Persons who have a history of adenomatous polyps, for example: • 1 or 2 small (<1 cm) tubular adenomas • Advanced or multiple adenomas (≥3) Manage according to the findings and clinical judgment, for example: • First follow-up colonoscopy at 5 years • First follow-up colonoscopy in 3 years. Timing of subsequent colonoscopy depends on findings at follow-up.* *From the American Gastroenterological Association, American Society for Gastrointestinal Endoscopy, American College of Physicians, American College of Gastroenterology (AGA/ASGE/ACP/ACG). Colorectal cancer screening and surveillance:

	clinical guidelines and rationale-update based on new evidence. Gastroenterology 2003 Feb;124(2):544-60.
People with a History of Colorectal Cancer	
AGA/ASGE/ACP/ACG (2003)	Patients with a colon cancer that has been resected with curative intent should have a colonoscopy around the time of initial diagnosis to rule out synchronous neoplasms. If the colon is obstructed preoperatively, colonoscopy can be performed approximately 6 months after surgery. If this or a complete preoperative examination is normal, subsequent colonoscopy should be offered after 3 years, and then, if normal, every 5 years.
FMS (2005)	No recommendations offered.
UMHS (2004)	*History of CRC*: After colonoscopy to rule out synchronous neoplasms and resection with curative intent, first follow-up colonoscopy after 3 years, and then, if normal, every 5 years. *From the American Gastroenterological Association, American Society for Gastrointestinal Endoscopy, American College of Physicians, American College of Gastroenterology (AGA/ASGE/ACP/ACG). Colorectal cancer screening and surveillance: clinical guidelines and rationale-update based on new evidence. Gastroenterology 2003 Feb;124(2):544-60.
People with Inflammatory Bowel Disease	
AGA/ASGE/ACP/ACG (2003)	In patients with long-standing, extensive inflammatory bowel disease, surveillance colonoscopy with systematic biopsies should be considered. This applies to both ulcerative colitis and Crohn's colitis because the cancer risk is similar in both diseases.
FMS (2005)	No recommendations offered.
UMHS (2004)	*Inflammatory bowel disease (ulcerative colitis, Crohn's colitis)*: In patients with long-standing, extensive inflammatory bowel disease (ulcerative colitis, Crohn's colitis), surveillance colonoscopy with systematic biopsies should be considered.* *From the American Gastroenterological Association, American Society for Gastrointestinal Endoscopy, American College of Physicians, American College of Gastroenterology (AGA/ASGE/ACP/ACG). Colorectal cancer screening and surveillance: clinical guidelines and rationale-update based on new evidence. Gastroenterology 2003 Feb;124(2):544-60.

TABLE 4: BENEFITS AND HARMS	
Benefits	
AGA/ASGE/ACP/ACG (2003)	• Increased rates of appropriate and timely colorectal cancer screening based on patient and physician collaboration • Improved physician and patient understanding of the rationale and evidence supporting colorectal cancer screening options (refer to the rationale section in the original guideline document for the relative effectiveness of each screening test) • Reduced morbidity and mortality due to colorectal cancer • Reduced health care costs
FMS (2005)	Screening may help detect colorectal cancer and reduce the incidence of or mortality from colorectal cancer.
UMHS (2004)	Early detection and treatment may avert future cancer-related illness.
Harms	
AGA/ASGE/ACP/ACG (2003)	• Currently available tests for fecal occult blood fail to detect many polyps and some cancers. Also, most people who test positive will not have colorectal neoplasia (have a false positive test result) and thus will undergo the discomfort, cost, and risk of colonoscopy without benefit. • Colonoscopy involves greater cost, risk, and inconvenience to the patient than other screening tests, and not all examinations visualize the entire colon. • Genetic testing can have psychological effects and subject persons with positive tests to the risks of discrimination. Therefore, it should only be performed after genetic counseling of patients and parents of children.
FMS (2005)	Harmful effects of screening include: • The physical complications of colonoscopy (perforation or haemorrhage) • Disruption to lifestyle • Stress and discomfort of testing and investigations

	• The anxiety caused by false positive screening tests • False negative tests. Because the sensitivity and specificity of faecal occult blood are rather poor, a negative result does not exclude colorectal cancer in a symptomatic patient.
UMHS (2004)	No harmful effects discussed

TABLE 5: EVIDENCE AND RECOMMENDATION RATING SCHEMES; REFERENCES SUPPORTING THE RECOMMENDATIONS	
Rating Scheme	
FMS (2005)	**Levels of Evidence** A. Strong research-based evidence. Several relevant, high-quality scientific studies with homogeneous results. B. Moderate research-based evidence. At least one relevant, high-quality study or multiple adequate studies. C. Limited research-based evidence. At least one adequate scientific study. D. No scientific evidence. Expert panel evaluation of other information. **References Supporting the Recommendations** • The database of abstracts of reviews of effectiveness (University of York), DARE-971223. In: Cochrane Library [database online]. Issue 4. Oxford: Update Software; 1999 • Towler BP, Irwig L, Glasziou P, Weller D, Kewenter J. Screening for colorectal cancer using the faecal occult blood test, Hemoccult [CD001216]. In: Cochrane Database of Systematic Reviews, Cochrane Library [database online]. Issue 2. Oxford: Update Software; 2002 • Vernon SW. Participation in colorectal cancer screening: a review. J Natl Cancer Inst 1997 Oct 1;89(19):1406-22. [214 references]
UMHS (2004)	**Levels of evidence reflect the best available literature in support of an intervention or test**: A. Randomized controlled trials B. Controlled trials, no randomization C. Observational trials

	D. Opinion of expert panel **References Supporting the Recommendations** American Gastroenterological Association, American Society for Gastrointestinal Endoscopy, American College of Physicians, American College of Gastroenterology (AGA/ASGE/ACP/ACG). Colorectal cancer screening and surveillance: clinical guidelines and rationale-update based on new evidence. Gastroenterology 2003 Feb;124(2):544-60.

GUIDELINE CONTENT COMPARISON

The American Gastroenterological Association in collaboration with the American Society for Gastrointestinal Endoscopy, American College of Physicians, and American College of Gastroenterology (AGA/ASGE/ACP/ACG), the Finnish Medical Society Duodecim (FMS), and the University of Michigan Health System (UMHS) present recommendations for CRC screening in people at average risk (asymptomatic, age ≥50 years, no other risk factors) and provide explicit reasoning behind their judgments. Also, AGA/ASGE/ACP/ACG, and FMS present recommendations for asymptomatic adults with some degree of increased risk of developing CRC. UMHS refers to expert guidelines from medical specialty organizations (AGA/ASGE/ACP/ACG, for example) for individuals at risk.

Areas of Agreement

Screening Adults of Average Risk

All guideline developer organizations represented in this synthesis recommend screening for colorectal cancer in average risk, asymptomatic adults. The two guideline developers located in North America, AGA/ASGE/ACP/ACG and UMHS provide an age at which screening should begin (≥50 years); FMS does not designate a starting age. The two guideline developers located in North America also recommend screening, utilizing one of several acceptable screening tests such as fecal occult blood testing (FOBT) or flexible sigmoidoscopy. These two groups present two or more acceptable screening options and do not explicitly recommend one screening test over another citing a lack of solid evidence to do so. FMS only considers FOBT for population-based screening in its recommendations (although it makes no clear recommendations for it); In discussing the rationale for FOBT, UMHS acknowledges that clear evidence for reduced CRC mortality exists with a mass FOBT screening program, but further notes that this screening modality has come under criticism due to its low sensitivity and specificity, low patient compliance, and the possibility that it does little more than randomly assign subjects to receive colonoscopy.

Choosing a Screening Intervention for Adults of Average Risk

The two guideline developer organizations presenting recommendations for how to choose a screening test, AGA/ASGE/ACP/ACG and UMHS, agree that patients

should be involved, to some degree, in selecting a screening intervention. Each of these organizations agrees the advantages and disadvantages of the various screening options should be shared with the patient. AGA/ASGE/ACP/ACG recommends candidates should then have the opportunity to select how they will be screened. UMHS states what should be considered when making the choice, one item being patient preference.

Acceptable Screening Interventions for Adults of Average Risk

DRE

All guideline developer organizations represented in this synthesis directly or indirectly acknowledge that the DRE is **not** an acceptable screening intervention.

FOBT, Sigmoidoscopy, FOBT + Sigmoidoscopy, Colonoscopy, Barium Enema

Two guideline developer organizations, AGA/ASGE/ACP/ACG and UMHS recognize FOBT, sigmoidoscopy, combination of FOBT and sigmoidoscopy, and colonoscopy as acceptable screening interventions for use in asymptomatic adults of average risk. These organizations acknowledge that the option of total colon examination (TCE) by colonoscopy or barium enema has not been supported by randomized controlled trials and that support for its use comes from indirect evidence of benefit and efficacy. UMHS notes that air or double-contrast barium enema is an acceptable modality, but does not recommend it. FMS only considered FOBT for screening asymptomatic adults of average risk (and colonoscopy for screening asymptomatic adults at increased risk). All organizations recognize that a positive FOBT result requires diagnostic follow-up.

Acceptable Screening Interventions for Adults of Increased Risk

Surveillance with Colonoscopy

There is general agreement among the guideline developers who provide screening recommendations for individuals at risk for developing CRC that colonoscopy is the most appropriate screening intervention for people with a history of adenomatous polyps, CRC, or inflammatory bowel disease.

Genetic Counseling and Genetic Testing

AGA/ASGE/ACP/ACG recommends genetic counseling followed by genetic testing for individuals with FAP and HNPCC. Genetic counseling and genetic testing are not interventions considered by FMS or UMHS.

Familial Susceptibility

The guidelines are in general agreement regarding screening recommendations for people with a family history of CRC. AGA/ASGE/ACP/ACG and UMHS recommend increased surveillance or earlier screening for these individuals. FMS recommends colonoscopy for persons with marked familial susceptibility but does not state the age at which to begin or how frequently.

Areas of Differences

Acceptable Screening Interventions for Adults of Average Risk

FOBT: Dietary Restrictions, Newer Technology

AGA/ASGE/ACP/ACG recommends use of dietary restrictions when the newer, more sensitive, guaiac-based FOBTs are used but not when the new immunochemical FOBTs are performed. AGA/ASGE/ACP/ACG cited a systematic review of 3 trials which found no improvement in positivity rates or change in compliance rates noting that the older, less sensitive guaiac-based tests were used in the trials. They further note that dietary restriction does affect the performance of the more sensitive guaiac-based FOBTs recently introduced into clinical practice. Dietary restrictions in relationship to FOBTs are not discussed by UMHS and FMS.

AGA/ASGE/ACP/ACG is the only guideline developer to specifically recommend use of immunochemical FOBTs in practice.

DCBE -- Screening Frequency

Differences are also noted in recommendations for screening frequency for double-contrast barium enema (DCBE) and colonoscopy. AGA/ASGE/ACP/ACG recommends DCBE every 5 years. UMHS refers to the AGA/ASGE/ACPA/ACG recommendation for DCBE screening every 5 years, but does not recommend, only stating the need for more observational studies of barium enema in literature.

This Synthesis was originally prepared by ECRI on June 7, 1998, and has been updated and revised on a number of occasions since that time. It has been reviewed by each of the guideline developers that are represented. It was updated in December 2006, to withdraw CTHPHC guidelines following their removal from the NGC Web site. This Synthesis was updated again on May 15, 2007 to withdraw ACS guidelines following their removal from the NGC Web site. This Synthesis was revised on November 28, 2007 following the removal of the USPSTF recommendations.

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